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ABSTRACT

This study investigated the findings of a previous study on the effectiveness of the Fort Bragg Child and Adolescent Mental Health Demonstration Project, a program that provided a comprehensive approach to the delivery of mental health and substance abuse services to a population of military-related children residing within the Fort Bragg catchment area. The previous study found no differences after 1 year in clinical outcomes between children treated in the continuum of mental health services of the Fort Bragg Child and Adolescent Mental Health Demonstration Project and children who received traditional services at two comparison sites, although clients improved at both sites. This present study uses data on 984 children (ages 5-17) collected by the Fort Bragg Evaluation Project (FBEP) at 18 months. Twelve key outcome variables were analyzed using a random regression or a hierarchical linear model. Results found that the earlier conclusions from FBEP are supported by the 18-month findings. Children at both sites improved equally, and the idea that a continuum of care yields better mental health outcomes remains unsupported. (Contains 15 references.) (CR)

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Children's Mental Health in a Continuum of Care: Clinical Outcomes at 18 Months for the Fort Bragg Demonstration

Authors

Introduction Method Results Conclusions References

Introduction

In the face of the seriously fragmented state of children's mental health services in the United States (Knitzer, 1982), Stroul and Friedman (1986) proposed that children receive services in a service system focused around a mental health continuum of care that would be comprehensive, community based, family focused, and culturally competent, providing services in the least restrictive setting possible. The continuum of care is a full range of mental health services that includes residential, intermediate, and nonresidential services. The assumption behind the continuum of care is that children would improve more under a continuum, because they would receive more appropriate, individuated services (Bickman, 1996a). To date, only one study, the Fort Bragg Evaluation Project (FBEP; Bickman et al., 1995), has conducted an empirical test of this assumption. The FBEP found no differences after one year in clinical outcomes between children treated in the continuum of mental health services of the Fort Bragg Child and Adolescent Mental Health Demonstration Project in Fayetteville, North Carolina (the Demonstration)1 and children who received traditional CHAMPUS2 services at two comparison sites (the Comparison), although clients improved at both sites. This led the evaluation team to conclude that the continuum of care theory was not supported.

This conclusion, however, has been disputed (Behar, 1996; Friedman & Burns, 1996; Lane, 1996). Although these disputes have been addressed (Bickman, 1996b), perhaps longer term follow-up may show that the Demonstration was more effective and successful for children with SED (Friedman & Burns, 1996). This paper uses data collected by the FBEP at 18 months (Wave 4) to do so.

The Demonstration and the FBEP

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Although the Demonstration and the FBEP have been described in detail elsewhere (Bickman et al., 1995), they are briefly reviewed here. The Demonstration provided a continuum of mental health services, including outpatient therapy, day-treatment, in-home counseling, therapeutic homes, specialized group homes, 24-hour crisis management services, and acute hospitalization. Individual case managers and interdisciplinary treatment teams worked with all children assigned to outpatient therapy in order to integrate and fit services to the needs of each child. Treatment plans utilized the least restrictive service options, and services were community-based. No co-payments were required for children and their families.

The FBEP, a quasi-experimental study, collected mental health outcome data on 984 children, ages five to 17, and their families to evaluate the relative effectiveness of the Demonstration. Five hundred and seventy-four children received mental health services at the Demonstration site. The remainder received mental health services at two comparable Army installations, Fort Campbell and Fort Stewart. Children at these sites received CHAMPUS services. Data collection occurred within 30 days of entry into the service system (Wave 1), six months (Wave 2), 12 months (Wave 3), and 18 months (Wave 4) after a participant's entry into the study. The data includes structured diagnostic interviews, behavioral checklists, demographic data, and other relevant background information. The children and adolescents at both the Demonstration and Comparison sites were comparable at intake on background, demographic, and initial mental health status (Bickman, et al., 1995). Children were predominantly male (63%), white (71%), and were mostly from middle income (54% earned between $20,000 and $40,000) two parent families (80%) in which at least one parent had some higher education (87% of families had one parent with more than a high school education). The average age was 11 years.

Methods

Twelve key outcome variables for Wave 4 (18 months) were analyzed using a random regression (Gibbons et al., 1993; Laird & Ware, 1982) or a hierarchical linear model (HLM; Bryk, Raudenbush, & Congdon, 1994; Bryk & Raudenbush, 1992). These variables, summarized in Table 1, are the same key variables used in earlier analyses (Bickman et al., 1995), except that the Global Level of Functioning (GLOF), an adaptation of the Child Global Assessment Scale (Shaffer et al., 1983), was dropped because it is redundant with the Child and Adolescent Functional Assessment Scale (CAFAS: Hodges, 1995), and the Vanderbilt Functioning Inventory (VFI; Bickman, Lambert, Summerfelt, & Karver, 1996), a short checklist of obvious functioning problems, was added.

Random regression or HLM overcome problems measuring change inherent in classical models, such as measuring change as a two-wave difference score versus a covariance residual or deleting whole cases missing any data versus imputing data not observed. Random regression and HLM use all observations and measure time exactly. Subjects are treated in these analyses as a random effect. Groups and explanatory covariates are treated as fixed effects. If the Demonstration children improved more, they would exhibit a significantly steeper slope than the Comparison children.

Because the FBEP had a serious amount of attrition (i.e., completion rates over 4 waves for the 12 key variables ranged from 65% for the grand total pathology measure to 81% for the VFI), and because attrition rates varied significantly between sites for several measures (i.e., participants from the Demonstration had higher attrition on the CBCL, the YSR, and the VFI), an attrition analysis was performed to determine whether attrition influenced differences in rates of clinical change by site. Two random coefficients outcomes analyses were conducted for the 12 key variables with "missingness" added in. "Missingness" was first defined categorically as missing either one or more waves or missing none, and then as the number of missing waves. If "missingness" influenced results, then there would be significant wave by site "missingness" effects.

In each approach, only one result was significant (the VFI in the unbalanced analysis, the Most Intense Child Reported Psychopathology in the balanced analysis; $p < 0.05$). Because only one of 12 results was significant, and the two different approaches show significant results for different outcome variables, it can be concluded that the influence of missing data on the outcome analyses was negligible.

Results

The belief that the Demonstration would result in improved outcomes for children over time is not born out by the mental health measures at 18 months for the entire FBEP

mental health measures at 18 months for the entire FBEP sample. Only two of the 12 key variables, the CAFAS and the VFI (both measures of functioning) showed significant site differences, and these results contradicted each other (see Table 2). According to the CAFAS, children at the Demonstration site were functioning better at 18 months, while according to the VFI, children at the Comparison site functioned better.

When the same analyses are restricted to the 317 children with serious emotional disorders (children with any PCAS diagnosis at intake and a GLOF score < 61), the picture changes slightly (see Table 3). The same contradictory results are found for the CAFAS and the VFI, yet the Demonstration is more effective according to the YSR.

Conclusions

The claims that services in the Fort Bragg Demonstration's continuum of care will be proven more effective than a traditional fee-for-service system of care over a longer period of time and that the Demonstration was effective for children with SED were not supported. At 18 months, only one of 12 key mental health outcome variables (CAFAS) favored the Demonstration for all children in the study, and that finding was contradicted by results from the VFI that favored the Comparison. For children with SED, only two outcomes favored the Demonstration (CAFAS and YSR) while the VFI again favored the Comparison. Even if the results for the VFI are discounted because its reliability and validity have not yet been established, the Demonstration still does not appear substantively more effective. Even when looking only at children with SED, the fact that only two of the twelve outcome variables favor the Demonstration at 18 months suggests that the continuum of care at the Demonstration site did not result in relative greater improvement.

It is clear from this data that the earlier conclusions from the FBEP are supported by the 18 month findings. Children at both sites improved equally, and the idea that a continuum of care yields better mental health outcomes remains unsupported. Also, given the Demonstration has not proven more effective over the 18 months, there is little rationale to expect that a Demonstration effect will become evident even further down the line. In light of these findings, researchers and policy makers need to reconsider the continuum of care. If a continuum of care can be implemented in a more cost efficient manner than it was at Fort Bragg, it is possible that the benefits of the Demonstration that were shown (i.e., increased access to more coordinated, individual, and less restrictive care community based services without a loss in the quality of care) will be considered adequate to justify implementing continuums of care for children's mental health services elsewhere.

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